

Combining Ability Analysis For Grain Yield And Its Attributes In Sesame

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ABSTRACT

The 6x6 diallel analysis in sesame revealed that the variances due to GCA and SCA were highly significant denoting the importance of additive and non-additive gene actions for all the traits studied. The GCA/SCA ratio was more than unity for all the traits except thousand seed weight thus, indicating the predominance of additive gene action. The parents VNP local and VRI-1 were good general combiners for majority of the traits. Three crosses Danbakkae x Koteche, VNP local x VRI-1 and PTDL-1 x Koteche, which found to be promising for seed yield per plant and most of the yield attributing traits which may yield transgressive segregants in later generations. The significance of mean squares due to RCA effects for days to first flower, number of branches per plant, number of capsules per plant, thousand seed weight and seed yield per plant indicated the importance of maternal effects in governing the expression of these traits.

Key words : Additive gene action, , Combining ability, Dominant gene action, Sesame.